## REMARKS

Applicant is in receipt of the Office Action mailed May 25, 2005.

## Claim Status

Claims 1-43 were pending in the application prior to entry of the present amendment.

Claims 1-43 have been canceled.

New claims 44-63 have been added.

Claims 44-63 are now pending.

## Art Rejections

Claims 1-4, 6, 8-10, 33-34, 36-39, and 41-43 were rejected under 35 U.S.C. 103(a) as being unpatentable over Schlapp et al. (USPN 5,579,473; hereinafter referred to simply as Schlapp) in view of Leung et al. (US Pub. 2003/0093744; hereinafter referred to simply as Leung).

Claims 5, 7, 35, and 40 were rejected under 35 U.S.C. 103(a) as being unpatentable over various combinations of Schlapp, Leung, Arimilli et al. (USPN 6,415,358), Tidwell et al. (USPN 6,437,789), and Vishlitzky et al. (USPN 5,787,473).

Claim 44 recites:
> A method for write-back of modified graphics data, the method comprising:
> a) ordering a list of data blocks currently in a level one cache by a least recently used value determined for each data block;
> b) setting a pointer to point to a data block at the top of the list, wherein the data block at the top of the list has a largest least recently used value, and wherein a data block currently indicated by the pointer is a current data block;
> c) testing a dirty tag bit corresponding to the current data block, wherein the dirty tag bit indicates whether the data in the block is modified;
> d) setting the pointer to point to a next data block in the list, if the dirty tag bit indicates that the current data block is not modified, and returning to c);

e) issuing a command to a memory request processor to write-back the current data block from the level one cache to a corresponding level two cache data block, if the dirty tag bit indicates that the current data block is modified;

f) modifying the dirty tag bit corresponding to the current data block to indicate that the current data block is no longer modified and the memory locations are available for future allocation; and

g) setting the pointer to point to a next data block in the list, and repeating steps c) through f) for each of the remaining data blocks in the list.

Arimilli does make reference to a least recently used field as part of a tag in col. 4, lines 20-38:

"The cache lines stored within data array 34 are recorded in cache directory 32, which contains one directory entry for each way in data array 34. Each directory entry comprises a tag field 40, coherency status field 42, least recently used (LRU) field 44, and inclusion field 46. Tag field 40 specifies which cache line is stored in the corresponding way of data array 34 by storing the tag bits (e.g., bits 0-19) of the system memory address of the cache line. As discussed in detail below with reference to FIG. 3, coherency status field 42 indicates the coherency status of the data stored in the corresponding way of data array 34 utilizing predefined bit combinations. LRU field 44 indicates how recently the corresponding way of data array 34 has been accessed relative to the other ways of its congruence class, thereby indicating which cache line should be cast out of the congruence class in response to a cache miss. Finally, inclusion field 46 indicates whether or not the cache line stored in the corresponding way of data array 34 is also stored in the associated L1 cache 12".

Note that Arimilli's teaching is limited to referring to the LRU field 44 ... in response to a cache miss.

Arimilli, Schlapp, Leung, Tidwell, and Vishlitzky either singly or in combination do not teach or render obvious a method comprising:

"ordering a list of data blocks currently in a level one cache by a least recently used value determined for each data block; setting a pointer to point to a data block at the top of the list, wherein the data block at the top of the list has a largest least recently used value, and wherein a data block currently indicated by the pointer is a current data block; ...setting the pointer to point to a next data block in the list, if the dirty tag bit indicates that the current data block is not modified, ... setting the pointer to point to a next data block in the list, and repeating c) through f) for each of the remaining data blocks in the list".

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In fact, Schlapp, Leung, Tidwell, and Vishlitzky are silent on the phrase "least recently used".

Therefore, Applicant submits that independent claim 44 and its dependent claims are patentably distinguished over Arimilli, Schlapp, Leung, Tidwell, and Vishlitzky for at least the reasons given above. Applicant further submits that independent claim 57 and its dependent claims are patentably distinguished over Arimilli, Schlapp, Leung, Tidwell, and Vishlitzky for at least the reasons given above in support of claim 44.

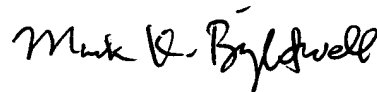Therefore, claims 44-63 are allowable.

## CONCLUSION

Applicant submits the application is in condition for allowance, and an early notice to that effect is requested.

If any extensions of time (under 37 C.F.R. § 1.136) are necessary to prevent the above referenced application(s) from becoming abandoned, Applicant(s) hereby petition for such extensions. If any fees are due, the Commissioner is authorized to charge said fees to Meyertons, Hood, Kivlin, Kowert & Goetzel PC Deposit Account No. 50-1505/5181-86900/JCH.

Also enclosed herewith are the following items:

☒ Return Receipt Postcard

☐ Request for Approval of Drawing Changes

☐ Notice of Change of Address

☐ Check in the amount of $      for fees (    ).

☐ Other:

Respectfully submitted,

Mark K. Brightwell
Reg. No. 47,446
AGENT FOR APPLICANT(S)

Meyertons, Hood, Kivlin, Kowert & Goetzel PC
P.O. Box 398
Austin, TX 78767-0398
Phone: (512) 853-8800
Date: August 25, 2005 MKB/JWC

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